**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): A method for controlling an output frequency of a laser, said method comprising:

passing optical energy from an output of said laser to an optical component having a frequency-selective response characteristic;

measuring response of said optical component having said frequency-selective response characteristic to said optical energy from said laser output using exactly one photodetector; and

controlling said laser output frequency based on said measured response by generating an error signal based on a difference between a measured laser output frequency and a desired laser output frequency and generating a control signal for said laser output frequency based on a sum of said error signal and a dithering signal; and

if said measured response indicates said laser output frequency is outside a tracking range, sweeping ~~a~~ <u>said</u> control signal until said laser output frequency is within said tracking range.

Claim 2 (cancelled)

Claim 3 (currently amended): The method of claim ~~3~~ <u>1</u> wherein generating an error signal comprises:

sampling said measured response at a first sampling time during a period that said dithering signal causes an upward fluctuation in said laser output frequency;

sampling said measured response at a second sampling time during a period that said dithering signal causes a downward fluctuation in said laser output frequency; and

developing said error signal based on a difference between samples recorded at said first sampling time and said second sampling time.

Claim 4 (original): The method of claim 1 wherein said optical component having a frequency-selective response characteristic comprises a fiber Bragg grating having a notch frequency substantially equivalent to a desired output frequency of said laser.

Claim 5 (cancelled)

Claim 6 (previously presented): A method for controlling an output frequency of a laser, said method comprising:

passing optical energy from an output of said laser to an optical component having a frequency-selective response characteristic;

measuring response of said optical component having said frequency-selective response characteristic to said optical energy from said laser output;

generating a dithering signal to dither said output frequency of said laser; and

controlling said laser output frequency based on said measured response as influenced by said dithering signal; and

if said measured response indicates said laser output frequency is outside a tracking range, sweeping a control signal until said laser output frequency is within said tracking range.

Claim 7 (original): The method of claim 6 wherein controlling said laser output frequency comprises:

generating an error signal based on a difference between a measured laser output frequency and a desired laser output frequency; and

generating a control signal for said laser output frequency based on said error signal and said dithering signal.

Claim 8 (original): The method of claim 7 wherein generating an error signal comprises:

sampling said measured response at a first sampling time during a period that said dithering signal causes an upward fluctuation in said laser output frequency;

sampling said measured response at a second sampling time during a period that said dithering signal causes a downward fluctuation in said laser output frequency; and

developing said error signal based on a difference between samples recorded at said first sampling time and said second sampling time.

Claim 9 (original): The method of claim 6 wherein said optical component having a frequency-selective response characteristic comprises a fiber Bragg grating having a notch frequency substantially equivalent to a desired output frequency of said laser.

Claim 10 (cancelled)

Claim 11 (original): The method of claim 6 wherein said dithering signal comprises a square wave.

Claim 12 (currently amended): Apparatus for controlling an output frequency of a laser, said apparatus comprising:

an optical component having a frequency-selective response characteristic, said optical component receiving optical energy from said laser;

exactly one photodetector that measures response of said optical component having said frequency-selective response characteristic to said optical energy from said laser output;

a control block that controls said laser output frequency based on said measured response, wherein said control block comprises:

an error signal generator that generates an error signal based on a difference between a measured laser output frequency and a desired laser output frequency; and

a control signal generator that generates a control signal for said laser output frequency based on said error signal and a dithering signal; and

a sweep generator that, if said measured response indicates said laser output frequency is outside a tracking range, sweeps ~~a~~ said control signal until said laser output frequency is within a tracking range.

Claim 13 (cancelled)

Claim 14 (previously presented): The apparatus of claim 12 wherein said error signal generator samples said measured response at a first sampling time during a period that said dithering signal causes an upward fluctuation in said laser output frequency, samples said measured response at a second sampling time during a period that said dithering signal causes a downward fluctuation in said laser output frequency, and develops said error signal based on a difference between samples recorded at said first sampling time and said second sampling time.

Claim 15 (original): The apparatus of claim 12 wherein said optical component having a frequency-selective response characteristic comprises a fiber Bragg grating having a notch frequency substantially equivalent to a desired output frequency of said laser.

Claim 16 (cancelled)

Claim 17 (previously presented): Apparatus for controlling an output frequency of a laser, said apparatus comprising:

an optical component having a frequency-selective response characteristic that receives optical energy from said laser;

a photodetector that measures response of said optical component having said frequency-selective response characteristic to said optical energy from said laser;

a dithering signal generator that dithers said output frequency of said laser; and

a control block that controls said laser output frequency based on said measured response as influenced by said dithering signal; and

a sweep generator that, if said measured response indicates said laser output frequency is outside a tracking range, sweeps a control signal until said laser output frequency is within said tracking range.

Claim 18 (original): The apparatus of claim 17 wherein said control block comprises:

an error signal generator that generates an error signal based on a difference between a measured laser output frequency and a desired laser output frequency; and

a control signal generator that generates a control signal for said laser output frequency based on said error signal and said dithering signal.

Claim 19 (original): The apparatus of claim 18 wherein said error signal generator samples said measured response at a first sampling time during a period that said dithering signal causes an upward fluctuation in said laser output frequency, samples said measured response at a second sampling time during a period that said dithering signal causes a downward fluctuation in said laser output frequency, and develops said error signal based on a difference between samples recorded at said first sampling time and said second sampling time.

Claim 20 (original): The apparatus of claim 17 wherein said optical component having a frequency-selective response characteristic comprises a fiber Bragg grating having a notch frequency substantially equivalent to a desired output frequency of said laser.

Claim 21 (cancelled)

Claim 22 (original): The method of claim 17 wherein said dithering signal comprises a square wave.

Claim 23 (currently amended): Apparatus for controlling an output frequency of a laser, said apparatus comprising:

means for passing optical energy from an output of said laser to an optical component having a frequency-selective response characteristic;

means for measuring response of said optical component having said frequency-selective response characteristic to said optical energy from said laser output using exactly one photodetector;

means for controlling said laser output frequency based on said measured response by generating an error signal based on a difference between a measured laser output frequency and a desired laser output frequency generating a control signal for said laser output frequency based on a sum of said error signal and a dithering signal; and

means for, if said measured response indicates said laser output frequency is outside a tracking range, sweeping ~~a~~ said control signal until said laser output frequency is within said tracking range.

Claim 24 (cancelled)

Claim 25 (previously presented): The apparatus of claim 23 wherein said means for generating an error signal comprises:

means for sampling said measured response at a first sampling time during a period that said dithering signal causes an upward fluctuation in said laser output frequency;

means for sampling said measured response at a second sampling time during a period that said dithering signal causes a downward fluctuation in said laser output frequency; and

means for developing said error signal based on a difference between samples recorded at said first sampling time and said second sampling time.

Claim 26 (original): The apparatus of claim 23 wherein said optical component having a frequency-selective response characteristic comprises a fiber Bragg grating having a notch frequency substantially equivalent to a desired output frequency of said laser.

Claim 27 (cancelled)

Claim 28 (previously presented): Apparatus for controlling an output frequency of a laser, said apparatus comprising:

means for passing optical energy from an output of said laser to an optical component having a frequency-selective response characteristic;

means for measuring response of said optical component having said frequency-selective response characteristic to said optical energy from said laser output;

means for generating a dithering signal to dither said output frequency of said laser;

means for controlling said laser output frequency based on said measured response as influenced by said dithering signal; and

means for, if said measured response indicates said laser output frequency is outside a tracking range, sweeping a control signal until said laser output frequency is within said tracking range.

Claim 29 (original): The apparatus of claim 28 wherein said means for controlling said laser output frequency comprises:

means for generating an error signal based on a difference between a measured laser output frequency and a desired laser output frequency; and

means for generating a control signal for said laser output frequency based on said error signal and said dithering signal.

Claim 30 (original): The apparatus of claim 29 wherein said means for generating an error signal comprises:

means for sampling said measured response at a first sampling time during a period that said dithering signal causes an upward fluctuation in said laser output frequency;

means for sampling said measured response at a second sampling time during a period that said dithering signal causes a downward fluctuation in said laser output frequency; and

means for developing said error signal based on a difference between samples recorded at said first sampling time and said second sampling time.

Claim 31 (original): The apparatus of claim 28 wherein said optical component having a frequency-selective response characteristic comprises a fiber Bragg grating having a notch frequency substantially equivalent to a desired output frequency of said laser.

Claim 32 (cancelled)

Claim 33 (original): The apparatus of claim 28 wherein said dithering signal comprises a square wave.